REMARKS

This application has been reviewed in light of the Non-Final Office Action dated November 25, 2009. Claims 1-3 are pending, with only Claim 1 in independent form. Claims 1-3 have been amended. Support for these amendments can be found in the original description at least at FIG. 4(b), FIG. 6(b), and paragraphs [0018], [0023]-[0025], and [0027]. (It should be noted, however, that the claims are not limited to the details of these embodiments, which are referred to for purposes of illustration only.) Favorable reconsideration is respectfully requested.

Claims 1-3 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 4,545,244 (Yasuda et al.). Applicants respectfully submit that the claims are patentable over Yasuda et al. for at least the following reasons.

Independent Claim 1 requires a doppler type ultrasonic flow meter for measuring volumetric flow of a measurement object fluid using doppler shift of ultrasound. The doppler type ultrasonic flow meter includes a pair of ultrasonic transducers and calculating circuitry. The pair of ultrasonic transducers is for transmitting ultrasound and receiving of an ultrasound echo of reflected ultrasound, the pair of ultrasonic transducers being disposed on the outside of a pipe having the measurement object fluid flowing therethrough, and being disposed symmetrically on an extension line of a measurement line for performing measurement of doppler shift. The calculating circuitry is for calculating at least (a) a first flow profile based upon an ultrasound echo received when a first of the pair of ultrasonic transducers is transmitting ultrasound, and (b) the volumetric flow of the measurement fluid based upon the first flow profile. The first flow profile is for the side opposite, with respect to the center axis of the pipe, the side on which the first of the pair of ultrasonic transducers is disposed.

A notable feature of Claim 1 is the first flow profile based upon an ultrasound echo received when a first of the pair of ultrasonic transducers is transmitting ultrasound, the first flow profile being for the side opposite, with respect to the center axis of the pipe, the side on which the first of the pair of ultrasonic transducers is disposed. As shown by FIG. 6(b) of the present invention, a flow profile is generated, based upon transmissions from transducer 3a on the right side of the pipe 2, for the left side of the pipe 2. (It should be noted, however, that the claims are not limited to the details of this embodiment, which is referred to for purposes of illustration only.)

FIG. 1 of Yasuda et al. discloses a first pair of transmitting/receiving transducers 6, 8 used to measure velocity V' of a fluid moving through pipe 2. Yasuda et al. states that a drawback of its embodiment of FIG. 1 is that the signal-to-noise ratio is too poor. The noise is

due to non-linear (e.g., serpentine) movement of the fluid moving through pipe 2. See col. 5, lines 27-42. Accordingly, Yasuda et al. introduces its embodiment of FIG. 3 to include not only a first pair of transmitting/receiving transducers 6, 8, but also a second pair of transmitting/receiving transducers 11, 10. This arrangement doubles the signals generated by the transducers (as compared to FIG. 1) and, consequently, improves the signal-to-noise ratio. See col. 5, lines 43-50, col. 7, lines 31-36, and col. 7, lines 54-59. Also compare curve (G) in FIG. 4, where the noise component ΔE_N-$\Delta E'_N$ from the double-pair of transducers is much less than the noise component in curve (C) in FIG. 4 ΔE_N from the single pair of transducers.

Contrary to Claim 1, however, the transducer pairs (6, 8) and (11, 10) of Yasuda et al. are not understood to measure a first flow profile based upon an ultrasound echo received when a first of the pair of ultrasonic transducers is transmitting ultrasound, the first flow profile being for the side opposite, with respect to the center axis of the pipe, the side on which the first of the pair of ultrasonic transducers is disposed. In particular, Yasuda is understood to teach that when its transducer 6 is transmitting in FIG. 3, velocity V_1 on the *same* side of the pipe 2 is measured in conjunction with transducer 8. Likewise, when Yasuda's transducer 11 is transmitting, velocity V_2 on the *same* side of the pipe 2 is understood to be measured in conjunction with transducer 10. Accordingly, Applicants respectfully submit that Yasuda does not teach or suggest at least Claim 1's first flow profile based upon an ultrasound echo received when a first of the pair of ultrasonic transducers is transmitting ultrasound, the first flow profile being for the side opposite, with respect to the center axis of the pipe, the side on which the first of the pair of ultrasonic transducers is disposed.

For at least the above discussed reasons, Applicants respectfully submit that Claim 1 is patentable over Yasuda.

The other claims in this application depend from Claim 1 and, therefore, also are submitted to be patentable for at least the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

While not all distinguishing features of the claims from the cited rejecting reference are discussed herein in order to expedite prosecution, such shall not be construed as an admission that particular features described herein are indeed taught or suggested by the prior art.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Should the Examiner have any issues concerning this reply or any other outstanding issues remaining in this application, the favor of a telephone call to Applicants' undersigned attorney is respectfully requested in order to expedite prosecution.

Respectfully submitted,

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DATE

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